

EKG CHART

Rhythm	Route			Rate	Rhythm	Life Threatening	Causes
	P Wave	PR Interval	QRS	Rate	Regularity		
Normal Sinus	Normal	0.12-0.20	<0.12	60-100	Regular	No	Normal Finding
Sinus Bradycardia	Normal	0.12-0.20	<0.12	<60	Regular	Dependent on Cause	Sleep, inactivity, athletic, vagal tone, drugs, MI, K+, respiratory arrest
Sinus Tachycardia	Normal	0.12-0.20	<0.12	>100, usually 100-150	Regular	No	Caffeine, exercise, fever, anxiety, heart failure, drugs, pain, hypoxia, hypotension, volume depletion
Atrial Pause	Looks like SR but drops a complex			Normal or slow	Irregular	Dependent on Length and Frequency	Elderly, digoxin toxicity, MI, rheumatic fever
Atrial Flutter	Saw tooth	None	<0.12	Atrial rate 250-400	Regular or Irregular	Dependent on ventricular rate	Valvular heart disease, MI, CHF, pericarditis
Atrial Fibrillation	Wavy unidentifiable	None	<0.12	Atrial rate >400	Irregular	Dependent on ability to perfuse	Heart disease, pulmonary disease, emotional stress, excessive alcohol or caffeine
Junctional Rhythm	Inverted before or after QRS or absent	<0.12	<0.12	40-60	Regular	Dependent on ability to perfuse	Electrical impulse not arriving from SA node, AV node fires at inherent rate
Accelerated Junctional Rhythm	Inverted before or after QRS or absent	<0.12	<0.12	60-100	Irregular	Dependent on ability to perfuse	Digoxin toxicity, damage to AV node
Junctional Tachycardia	Inverted before or after QRS or absent	<0.12	<0.12	>100	Regular	Dependent on ventricular rate	Same as SVT

EKG CHART

Rhythm	Route			Rate	Rhythm	Life Threatening	Causes
	P Wave	PR Interval	QRS	Rate	Regularity		
Supraventricular Tachycardia	Pointed or hidden in T	Immeasurable	<0.12	150-250	Regular	Dependent on rate and patient ability to tolerate	Caffeine, CHF, fatigue, hypoxia, mitral valve disease, altered pacemaker in heart
Idioventricular Rhythm	None	None	>0.11 wide and bizarre	20-40	Irregular	Yes	Digoxin toxicity, acute MI
Ventricular Tachycardia	None	None	>0.11 wide and bizarre	150-250	Regular	Yes, may have pulse	MI, ischemia, digoxin toxicity, hypoxia, acidosis, ↓K ⁺ , ↓BP
Ventricular Fibrillation	None	None	None	None	Irregular, vary in size, shape and height	Yes, no pulse	Follow PVC, VT, most common cause of sudden death
Asystole	Possible	None	None	None	No QRS	Yes	Follows VT/VFib, acidosis, hypoxia, ↓K ⁺ , hypothermia, drug overdose
1° AV Block	Normal	>0.20	<0.12	Varies	Regular or irregular	Usually Not	First sign of increasing AV block
2° AV Block Type I	Normal	Varies: progressively prolonged	<0.12	Varies	Regularly irregular: QRS dropped after progressively prolonged PRI	Usually Not	Acute inferior MI, digoxin toxicity, vagal stimulation, conduction system disease
2° AV Block Type II	Normal	Consistent normal or prolonged	Normal or wide	Usually slow	Regular or irregular; occasionally dropped QRS	Dependent on overall ventricular rate, may progress to 3° AV Block	BBB, anterior MI, lesions of conduction system
3° AV Block	Normal	No relationship between PR & QRS	Wide	Slow	Regular	Yes: pacemaker needed	Atria and ventricles beat independently, digoxin or K ⁺ toxicity, acute MI, ischemic heart disease

EKG CHART

Rhythm	Route			Rate	Rhythm	Life Threatening	Causes
	P Wave	PR Interval	QRS	Rate	Regularity		
Premature Atrial Contractions	Yes, PAC P wave shaped different	May differ from underlying rhythm	<0.12	Rate of underlying rhythm	PAC complexes come early	No	Coffee, tea, alcohol, CHF, emotions, fatigue, fever, hypoxia, mitral valve disease
Premature Junctional Contractions	Inverted before or after QRS or absent	<0.12	<0.12	Rate of underlying rhythm	PJC make it irregular	No	Vagal tone, stress, caffeine, alcohol, heart failure, digoxin toxicity, ↓K+
Premature Ventricular Contractions	None	N/A	>0.11 wide and bizarre	Dependant on underlying rhythm	Irregular due to premature beat	Depends on frequency and how close to T wave	Ventricular irritability, hypoxia, ↓K+, Ca, MI, digoxin toxicity, anxiety